

Life Forum

Update on implications of recent financial events on economic assumptions



Agenda

- Risk free rates
- Credit spreads/liquidity premiums
- Correlations
- Negative inflation
- Zero interest rates
- Stress testing



Risk Free Rates

- Government bonds or swaps
- Role of credit default swaps
- Differences in Eurozone yields – which can be used?

<HELP> for explanation.

Index **GCDS**

99<GO> to save current selections

Pricing Source **CMAN**

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CDS Sector Graph

Region, Sector, Rating

Europe

Sovereigns (Developed)

Inv. Grade

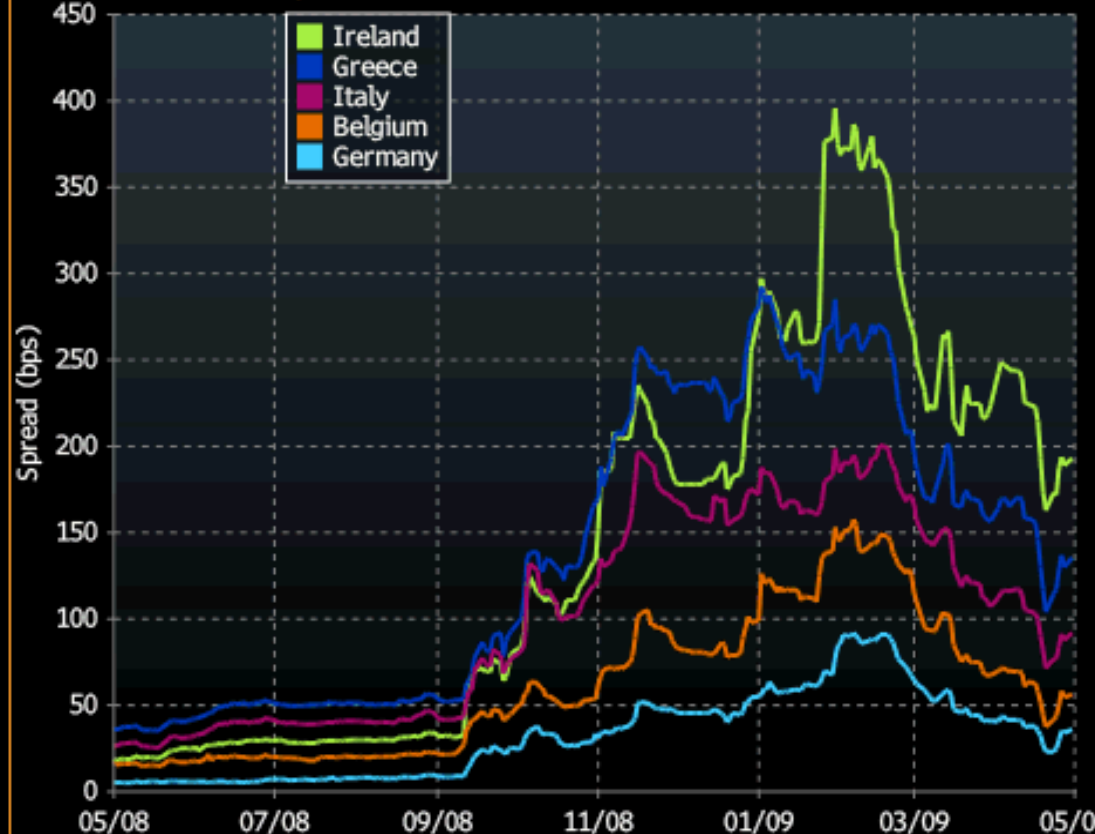
5Yr CDS History

Term Structure

Normalize

Period

1 Year



	Reference Name	5Y Sprd.
101)	<input type="checkbox"/> Iceland	700.5
102)	<input checked="" type="checkbox"/> Ireland	193.0
103)	<input checked="" type="checkbox"/> Greece	135.5
104)	<input type="checkbox"/> Austria	92.1
105)	<input checked="" type="checkbox"/> Italy	92.0
106)	<input type="checkbox"/> Spain	81.5
107)	<input type="checkbox"/> United Kingdom	77.4
108)	<input type="checkbox"/> Portugal	62.1
109)	<input type="checkbox"/> Switzerland	60.5
110)	<input checked="" type="checkbox"/> Belgium	56.2
111)	<input type="checkbox"/> Sweden	52.3
112)	<input type="checkbox"/> Kingdom of Denmark	49.9
113)	<input type="checkbox"/> Netherlands	40.8
114)	<input type="checkbox"/> France	37.7
115)	<input checked="" type="checkbox"/> Germany	36.0
116)	<input type="checkbox"/> Finland	35.0
117)	<input type="checkbox"/> Norway	29.0
118)	<input type="checkbox"/> Malta	N.A.

30) Spreads(CDSH)

40) Term Structure(CDHT)

50) Switch(CHSA)

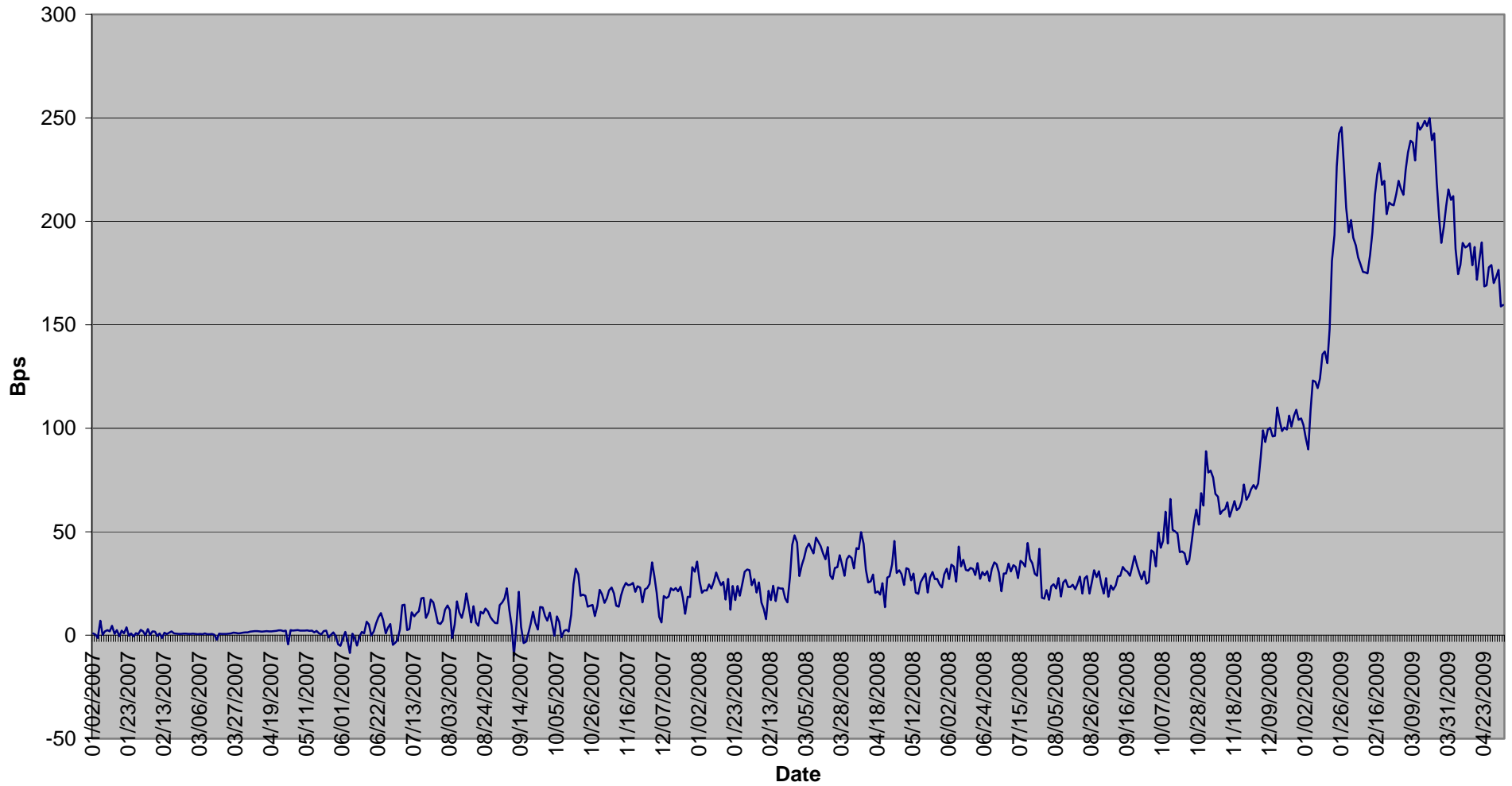
60) Sector(GCDS)

Australia 61 2 9777 8600 Brazil 5511 3048 4500 Europe 44 20 7330 7500 Germany 49 69 9204 1210 Hong Kong 852 2977 6000
 Japan 81 3 3201 8900 Singapore 65 6212 1000 U.S. 1 212 318 2000

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 SN 224150 6813-709-2 19-May-2009 18:07:29



Spread - 10 year bonds - Ireland/Germany





Arguments

- Economic
 - Who or what is really risk free?
 - Issues with swaps
 - Issues with CDSs
- Political
 - Governments ever prohibit the use of their own bonds?
- And the answer is....

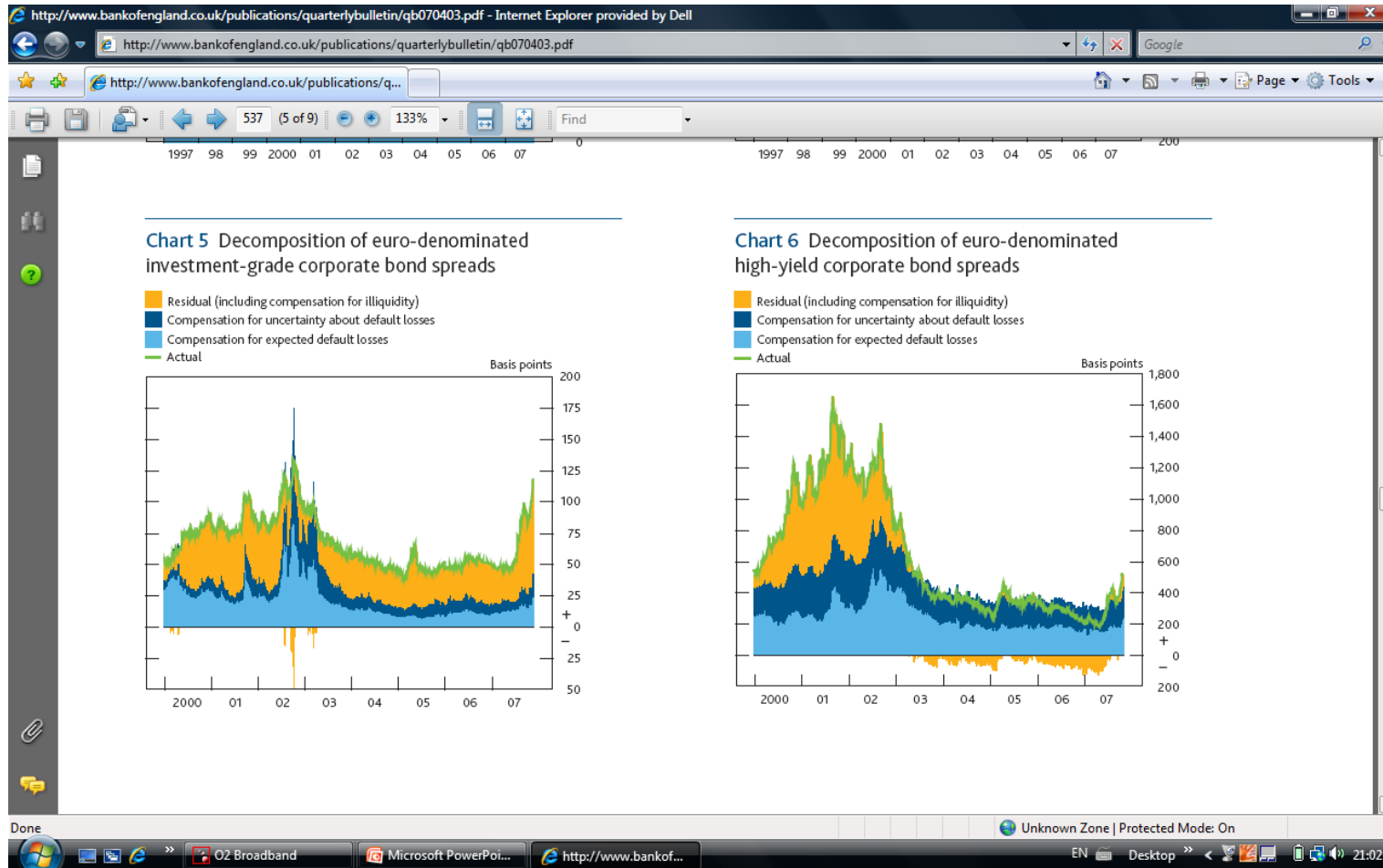


Credit spreads/Liquidity Premiums

- Significant work carried out by Bank of England
- Adopted by FSA
- Tends to conclude that liquidity premiums make up 50% to 70% of the spread over risk free
- FSA in recent “discussions” with companies in the UK
- Survey carried out by Watson Wyatt in the UK



Bank of England Paper





Correlations - Markets

Inflation-protected Treasuries	TIP	Inflation-protected Treasuries	US Bonds	Natural Resources (Oil)	Commodities Index	US Real Estate	International Real Estate	Emerging Markets	Europe, Australasia, Far East	US Small Cap Stocks	US Large Cap Stocks	US Mid Cap Stocks	European Stocks	
US Bonds	AGG	0.41												
Natural Resources (Oil)	IGE	-0.4	-0.22											
Commodities Index	GSG	-0.42	-0.2	0.71										
US Real Estate	VNQ	-0.27	-0.24	0.71	0.41									
International Real Estate	RWX	-0.29	-0.14	0.79	0.49	0.69								
Emerging Markets	EEM	-0.34	-0.26	0.9	0.59	0.8	0.81							
Europe, Australasia, Far East	EFA	-0.24	-0.16	0.85	0.47	0.81	0.87	0.9						
US Small Cap Stocks	VB	-0.27	-0.23	0.83	0.5	0.92	0.8	0.89	0.89					
US Large Cap Stocks	VV	-0.31	-0.25	0.88	0.54	0.88	0.84	0.93	0.93	0.96				
US Mid Cap Stocks	VO	-0.3	-0.22	0.88	0.56	0.9	0.83	0.92	0.91	0.99	0.98			
European Stocks	VGK	-0.24	-0.13	0.84	0.47	0.78	0.88	0.87	0.99	0.87	0.92	0.9		
Pacific Rim Stocks	VPL	-0.27	-0.25	0.84	0.49	0.8	0.79	0.89	0.95	0.87	0.91	0.88	0.91	
NASDAQ	^XIC	-0.34	-0.29	0.85	0.55	0.89	0.8	0.93	0.9	0.97	0.97	0.98	0.89	0.89



Correlations - Countries

United States		South Africa	France	Germany	Spain	Sweden	United Kingdom	Australia	Japan	South Korea	Taiwan	Brazil	Chile	Mexico	Israel
South Africa	0.89														
France	0.9	0.83													
Germany	0.87	0.82	0.97												
Spain	0.88	0.84	0.96	0.94											
Sweden	0.87	0.77	0.94	0.92	0.91										
United Kingdom	0.88	0.81	0.91	0.89	0.89	0.87									
Australia	0.9	0.88	0.88	0.86	0.9	0.82	0.85								
Japan	0.87	0.82	0.88	0.86	0.88	0.84	0.81	0.84							
South Korea	0.79	0.76	0.72	0.71	0.74	0.66	0.69	0.77	0.75						
Taiwan	0.81	0.83	0.79	0.76	0.82	0.71	0.72	0.83	0.76	0.88					
Brazil	0.88	0.87	0.83	0.78	0.81	0.79	0.85	0.82	0.78	0.75	0.81				
Chile	0.49	0.4	0.51	0.49	0.47	0.54	0.54	0.46	0.4	0.29	0.27	0.5			
Mexico	0.87	0.78	0.82	0.78	0.78	0.78	0.81	0.75	0.76	0.72	0.72	0.85	0.46		
Israel	0.77	0.69	0.76	0.7	0.71	0.74	0.67	0.73	0.69	0.6	0.72	0.73	0.46	0.69	
Turkey	0.91	0.9	0.84	0.83	0.86	0.81	0.85	0.86	0.78	0.76	0.8	0.85	0.39	0.84	0.65



Correlations

- The diversification argument
- Leverage and cost of capital are great correlators
- Is there a reason why correlations should not be 1 for stress tests?



Negative Inflation

- Exposing new issues
- CPI guarantees may have a floor of zero
- Assets may have no floor
- Source of latest recent investment bank losses
- Expense charges have to deflate?
- Outsourcing agreements with “locked in” inflation?

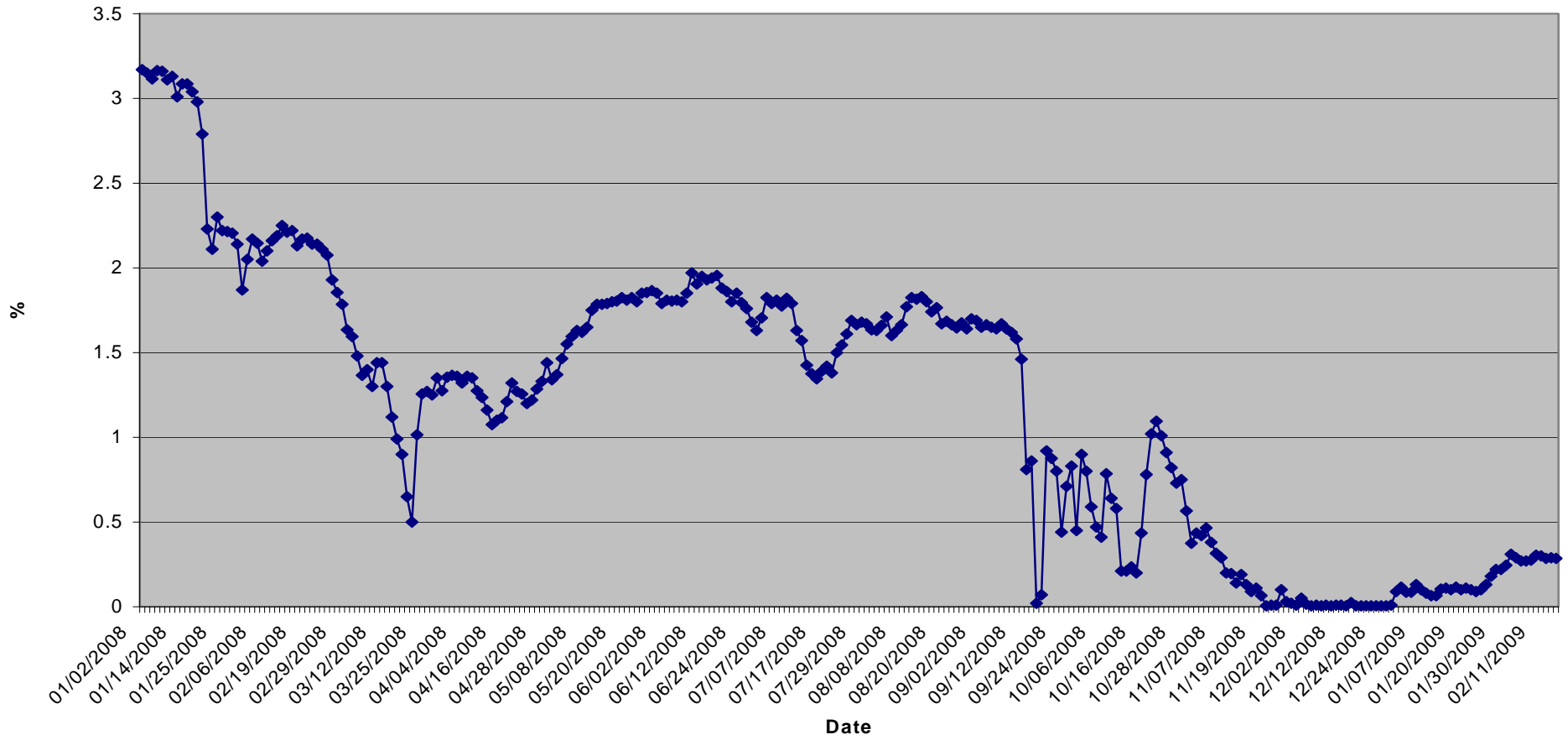


Zero interest rates

- Collect charges on cash/bond funds?
- VAs cost of guarantees/charges?
- Negative interest rates?



3 month USD T Bill





Stress Tests

- More extremes on markets
- Greater “shocks”
- New scenarios
 - Sovereign default
 - Leave Euro
 - Eurozone bail out